

[54] **DISPLAY BOOK**

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[30] **Foreign Application Priority Data**

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July 7, 1971 Germany..... P 21 33 670.9

[52] U.S. Cl. **40/102**

[51] Int. Cl. **G09f 11/06**

[58] Field of Search 40/102; 35/49, 55

[56] **References Cited**

UNITED STATES PATENTS

3,460,282 8/1969 Swirsky..... 40/102

3,191,319 6/1965 Waisgerber 35/49
3,514,875 6/1970 Howard 35/55

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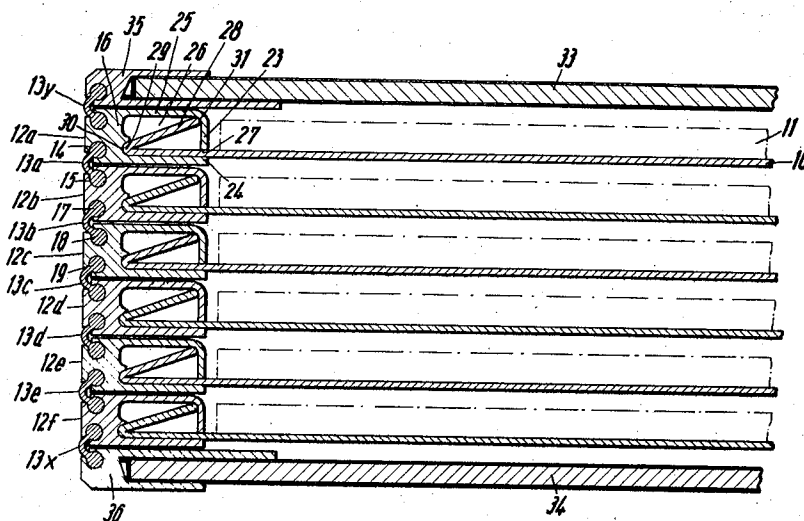
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[57]

ABSTRACT

A display book that can be added to or subtracted from by the addition or removal of individual plastic holding units is provided. Stiff plastic pages designed to carry textile samples are fastened in the holding units by simply bending their edges greater than 90°. The holding units have a pair of bores for receiving a flexible plastic lock member. The plastic lock member also attaches the covers to the book and if desired a pair of locking lid members.

14 Claims, 11 Drawing Figures



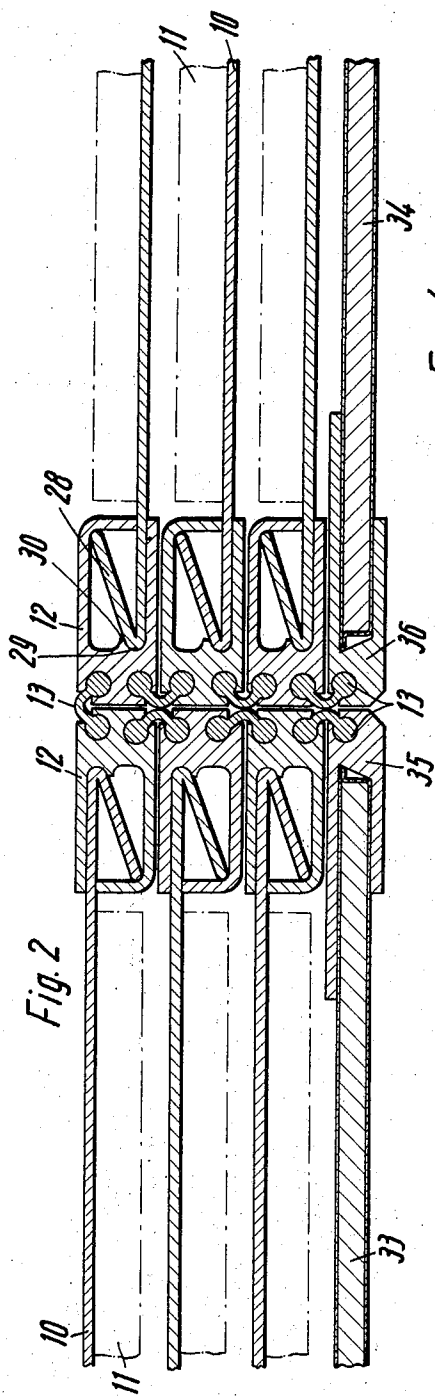
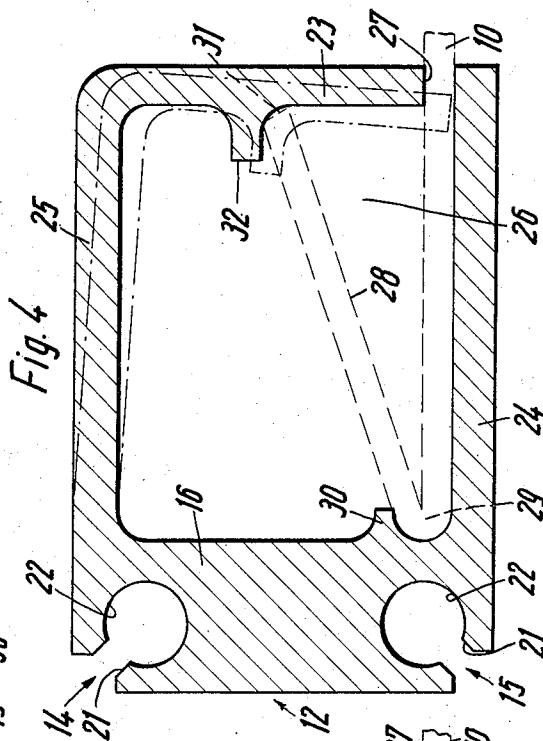
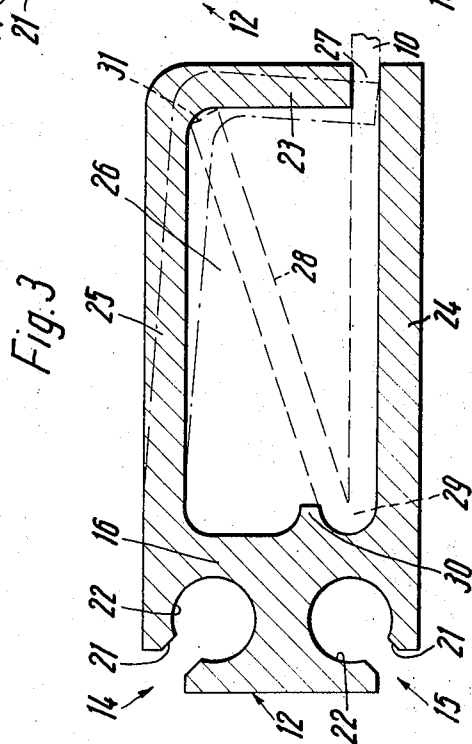


Fig. 5

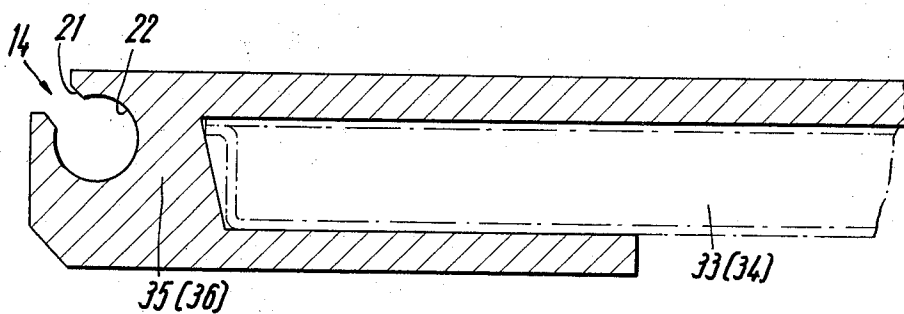
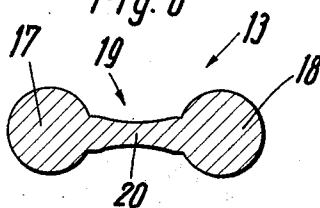


Fig. 6



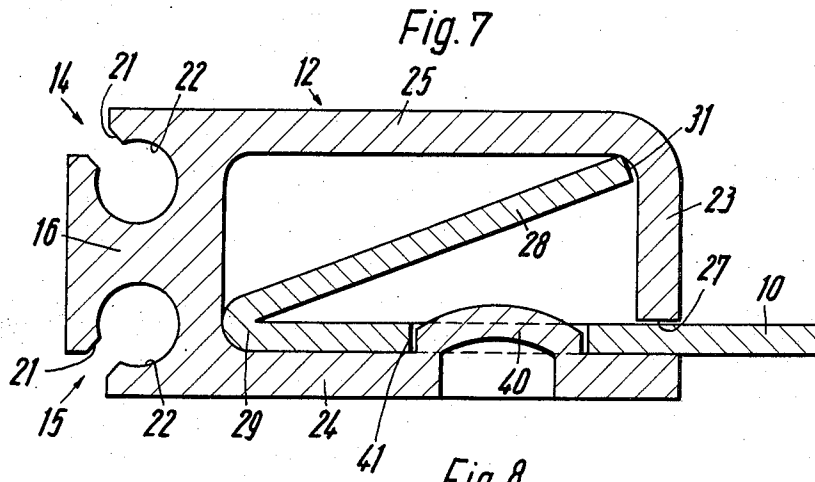
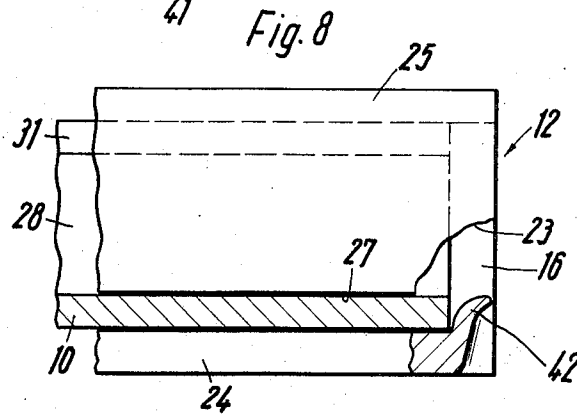
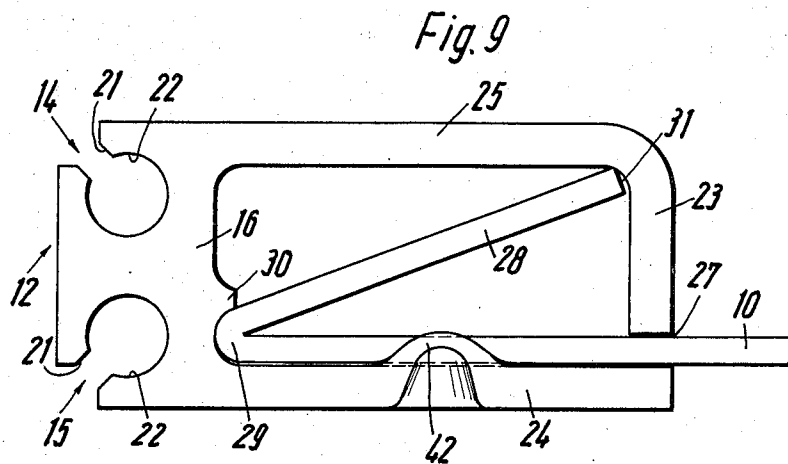
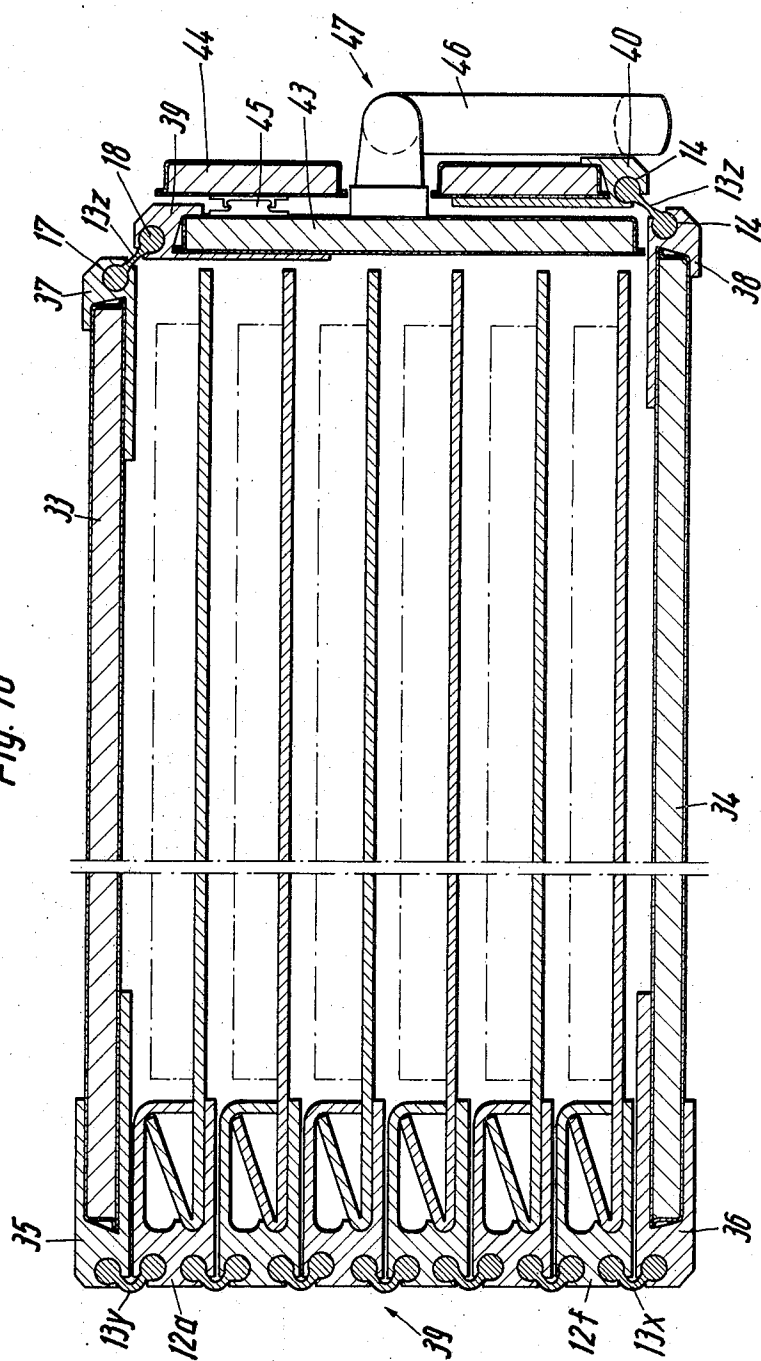


Fig. 10



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DISPLAY BOOK

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a sample book with a plurality of swingably interconnected holding units or rails, each of which is designed for the reception of at least one leaf-like stiff carrier for samples.

2. Description of the Prior Art

Such sample books are used predominantly for the presentation of textile samples, especially floor coverings. It is customary to attach several smaller or larger samples on one sample card, respectively, and to attach the latter in holding devices or retaining rails. Several such retaining rails are usually connected with each other swingably to form a sample book.

It is known in the prior art to provide a sample book in which the individual plastic retaining rails are connected with each other, along the back walls of the sample cards, in each case, by conventional hinges which are secured at the corners of the retaining rails. At their corners, the retaining rails are in each case provided with hinge segments which are at an interval from each other and which engage the intervals between the hinge segments of the neighboring retaining rail. A hinge pin, which passes through or penetrates the coaxially located hinge segments of two neighboring retaining rails, holds the two retaining rails together in a swingable manner. The design thus corresponds to a hinge which is customary in lids, flaps and the like.

The disadvantage of this known hinge connection consists in the fact that the production and assembly of the units are comparatively expensive. The hinge segments must be worked in a very neat manner and must be fashioned so that they will exactly fit together in order that the hinge pins may be introduced.

SUMMARY OF THE INVENTION

The invention is based on the task of providing a sample book consisting of individual, swingably interconnected holding units, a book which will have the simplest possible structure and handling, and in which the individual parts can be easily exchanged and where additional parts can be easily added in order to enlarge the existing sample book. Likewise the production costs are reduced, in comparison to known sample books.

A sample book according to the present invention is characterized by the fact that the holding units are assembled into a block, at the back walls facing away from the samples or sample cards, by means of individual, elastically deformable joint strips which can connect two, neighboring holding units with each other. The joint strip can be connected with each of these neighboring holding units in various ways. According to one preferred feature of the invention, however, this is done in a form-locking manner.

The joint strips, which along their edges are provided with bulge-like thickenings, are received in a form-locking manner, in grooves positioned at the corners of the holding units, with the inside cross-section of these grooves having a bulge-like widening. The joint strips are positioned into the grooves in the longitudinal direction of the holding units.

A sample book designed in this fashion has an extremely simple structure and is simple to produce be-

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cause it consists exclusively of extruded parts. The assembly is likewise very simple because there is no difficulty in drawing the joint strips into the grooves of the neighboring retaining rails. By means of this arrangement, as well as because of the flexibility of the joint strips, the sample book can be handled in such a way that every individual sheet can be swung by about 180° with respect to the neighboring one.

Further features of the invention concern the structure of the holding unit as well as of the joint strips and the anchoring of the individual sample cards in the holding unit.

Furthermore, the invention is intended to connect the lid parts flexibly with each other in a particularly advantageous manner, more specifically, in such a fashion that individual lid parts, such as, for example, the grasping flap and/or the folding flap are arranged flexibly and in an easily exchangeable fashion, so that they can be adapted to the particular thickness of the sample book without difficulties.

To this extent, a cover portion is characterized by lid parts which are flexibly arranged by means of elastically deformable joint strips, which are known in themselves, and which serve to cover the sample cards with the samples as well as the holding units, whereby the joint strips are anchored with thickenings provided at their edges in a form-locking manner and are anchored movably in the grooves of the parts which are to be connected.

These features according to the present invention achieve a great advantage in that the lid parts can be connected reliably and durably with each other in a particularly simple, inexpensive manner, but that the connection nevertheless can be easily separated and that there is therefore a possibility of adapting the lid parts, in accordance with the particular variable dimensions of the sample book, especially in keeping with its particular thickness.

Furthermore, the present invention provides a special way of connecting the individual lid parts among each other and with the holding units for the sample card with the samples, the retaining rails being provided at the back edge of the book.

BRIEF DESCRIPTION OF THE DRAWINGS

Further details are explained more thoroughly below with the help of the following drawings, in which:

FIG. 1 is a cross-section of a part of a sample book according to the invention;

FIG. 2 is a sample book according to FIG. 1, in the opened state;

FIG. 3 is a cross-section of an individual holding unit according to the invention;

FIG. 4 is another holding unit, likewise in cross-section;

FIG. 5 is a cross-section of a lid rail for the reception of a book lid;

FIG. 6 is a cross-section through a joint strip;

FIG. 7 is a cross-section through a modified version of a holding unit;

FIG. 8 is a longitudinal cross-section through a holding unit with an attachment for the sample card, the attachment being arranged at the ends;

FIG. 9 is a front view of the holding unit, according to FIG. 8;

FIG. 10 is a cross-section of a closed sample book; and

FIG. 11 is a modified embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The book of the present invention consists of a plurality of sample cards made of stiff cards or the like, which are provided, each with one or more textile samples 11, for example floor coverings or flooring tiles. The sample cards 10 are anchored with one edge, in each case, in a holding unit 12a through 12f. The holding units 12a, 12b, etc., are generally in the shape of elongated rectangular parallelepipeds and are swingably connected with each other in such a manner that the group of swingable holding units, connected next to each other, will be combined into a block-like structure. Preferably, each holding unit 12a, 12b, etc., serves for the reception of one sample card 10.

The holding units 12a, 12b, etc., are so connected with the particular neighboring retaining rails that they can be swung toward each other by about 180°. This makes it possible for every sample card 10, in other words, every page of the "book", to be opened up completely into a position according to FIG. 2; in other words, without deformation of the sample cards 10. In the example illustrated here, this is accomplished by having the neighboring holding units 12a, 12b, etc., in each case connected with each other by means of flexible joint strips 13a, through 13e. These joint strips 13a, 13b, etc., engage units 12a, 12b, etc. For this purpose, the retaining rails are made with grooves 14 and 15 which preferably run over the entire length of these rails (see especially FIGS. 3 and 4). The grooves 14 and 15 are in each case arranged at the corners of the back walls 16 of the holding units 12a, 12b, etc., or, in other words, at the interface of the back walls 16, with the walls 24 and 25. Looking at it in a cross-section, grooves 14 and 15 are directed in one direction at an angle of 45° with respect to the adjoining surfaces of the holding units 12a, 12b, etc. The grooves 14 and 15 are so designed that there will develop undercuttings for the form-locking reception of the joint strips 13a, 13b, etc., which are provided with corresponding protrusions.

The specially illustrated example can be seen from a joint strip 13a, 13b, etc., according to FIG. 6, in which two lateral heads 17 and 18 having circular cross-section are connected with each other by means of an elastic bar 19. In its middle, the bar has a cross-section reduction 20, in order to facilitate the bending or folding in this area. The joint strip 13a, 13b, etc., is preferably made by extrusion from polypropylene. The cross-section reduction 20 is produced by, for example, stretching in the lateral direction of the joint strip.

As may be seen in FIGS. 3, 4, and 5, a narrow, slit-like passage 21 in the holding units and cover rails for the reception of bar 19, adjoins a circular cross-section opening 22 for the reception of a head 17 or 18 of the joint strips 13a, 13b, etc. The cross-section of the slit-like passage 21 of grooves 14 and 15 corresponds, each, to roughly half the cross-section of the heads 17, 18 of the joint strip 13a, 13b, etc. The mounted position of the joint strips 13a, 13b, etc., can be seen particularly from FIGS. 1 and 2.

The holding unit 12a, 12b, etc., are preferably made as clamp rails. By means of a front wall 23, which is opposite the back wall 16, as well as the bottom wall 24

and a cover wall 25, a through-going hollow space 26 is enclosed, in which the sample card 10 is anchored, preferably in a form-locking and force-locking manner.

The sample card 10 enters the hollow space 26 via a slit 27 and it is there fixed by means of a folded-over edge strip 28 which is pointed at an acute angle toward the sample card 10. The double edge 29, which is formed by the edge strip 28 with the sample card 10 and which faces toward the back wall 16, seats against the back wall 16 and is secured by a short catch or stud 30 which protrudes away from the back wall 16. The free edge 31 of the edge strip 28 rests against the front wall 23 as well as the cover wall 25. In a holding unit having a greater thickness—for particularly high-nap samples—there is provided, at the front wall 23, a special catch 32 for the placement of the free edge 31 of the edge strip 28 (FIG. 4).

The front wall 23 presses against the topside of the sample card 10 and thus constitutes an additional, force-locking retention.

Since all recesses, depressions and protrusions go through the entire length of the holding units 12a, 12b, etc., the latter can be made by an extrusion pressing from a continually extruded strand.

The holding units 12a, 12b, etc., which are combined into a book are covered on the outside—that is, on top and below—with particularly stiff book covers 33 and 34. These are likewise swingable individually with respect to the neighboring holding units 12a, and respectively, 12f. For this purpose, book covers 33 and 34 are in each case attached to the cover rails 35 and 36 which are connected, in the previously described manner, by joint strips 13x and 13y with the neighboring holding units 12a and 12f.

Although the previously described arrangement of the sample card in the holding units 12a, 12b, etc., provides adequate security, in most cases, against the longitudinal shifting of the sample card 10 in holding units 12a, 12b, etc., additional holding or securing may be provided. FIG. 7 illustrates one version of an additional securing device. Accordingly, there is provided, in the bottom wall 24 of retaining rail 12, at least one knob-like rise 40, which for example, can be molded. In the area of this knob-like rise 40, the sample card 10 is provided with a fitting borehole 41 so that the sample card 10 will be fixed in position, in a form-locking manner, by rise 40.

FIGS. 8 and 9 show one version of a device for securing the sample card 10 against shifting; here the sample card 10 remains unchanged. This is made possible by projections 42, which are arranged on the ends of the retaining rail 12 and on which the end edges of the sample card 10 are positioned. It is practical to arrange, on both ends of the retaining rails 12, such projections 42 which can be made by a simple working of the plastic, for example, by pressing with a heated pin in case of thermoplastic synthetic materials.

FIG. 10 shows how, on the book closing side 47, individual cover rails are connected with each other and on the ridge side 39 of the book with holding units 12a, 12f, in a flexible manner.

The cover parts are upper book cover 33, lower book cover 34, grasping flap 43 and folding flap 44. In FIG. 10 the grasping flap 43 with handle 46 is flexibly arranged on the upper book cover 33, and the folding flap 44 is flexibly arranged on the lower book cover 34, in each case, with joint strips 13z. The grasping flap 43

and the folding flap 44 can be closed or locked by means of press-button 45.

The upper book cover 33 is guided along the holding unit 12a by means of joint strip 13y and the lower book cover 34 is guided along the holding unit 12f by means of joint strip 13x.

For purposes of the simple design of cover parts 33, 34, 43, 44, these parts are attached in the cover rails 35, 36, 37, 38, 39, 40. These cover rails 35, 36, 37, 38, 39, 40 are provided with grooves 14 (see FIGS. 5 and 10). These grooves 14 run along the entire length of the cover rails 35, 36, 37, 38, 39, 40.

With heads 17, 18, provided at their edges, joint strips 13x, y, z engage in a form-locking and movable fashion, in groove 14 of the parts that are to be connected. In this way, the cover parts are arranged flexibly and in an easily exchangeable manner. It is possible to exchange every one of the cover parts 33 to 40 and to replace them with cover parts adapted to the particular thickness and/or height and/or width.

The sample book can also be so made that the lock, for example, the press-button 45, is provided between the folding flap 44 and a book cover, for example, the upper book cover 33. In this case, which is not illustrated in the drawing, the grasping flap 43 would, with its lower end, be flexibly connected by means of joint strip 13z with the lower book cover 34 and the folding flap 44 would be flexibly connected by means of joint strip 13z with the upper end of the grasping flap 43.

In a modified sample book according to FIG. 11, the holding units 12a, 12b, etc. are connected with each other in the above manner described by joint strips 13a, 13b, etc. The modification resides in the relative position of the retaining rails which cooperate in pairs. The cross-section of these rails is unsymmetrical in as much as the slit 27, for the passage of the sample cards 10a, 10b, etc., is located outside the longitudinal median plane of the retaining rails 12a, 12b, etc., that is to say, right next to the bottom wall 24. In the versions according to FIGS. 1-10, the holding units 12a, 12b, etc., are so arranged in relative position with respect to each other that the sample cards 10a, 10b, etc., will be at equal intervals from each other. In the arrangement according to FIG. 11, two each holding units 12a and 12b, and respectively 12c and 12d, are so connected with each other that the slits 27 and thus the sample cards 10a, 10b, etc., are at a maximum interval from each other. The sample cards 10a, 10b, respectively, 10c, 10d, here are turned toward each other with their display sides. The advantage of this arrangement consists in the fact that a larger interval is formed between two sample cards, for example, between the two sample cards 10a and 10b of the retaining rails 12a and 12b. This larger interval is suited for absorbing particularly high, respectively, three-dimensional samples 52. This sample book according to FIG. 11 thus is suited for three-dimensional samples 52 of all kinds.

In the example shown in FIG. 11, the neighboring sample cards, which are located at a distance from each other, are provided at the display sides facing each other, with molded depressions which, for example, are formed by an all-around frame 50a and 50b. The depressions in the individual sample cards 10a, 10b, etc., which are enclosed by this frame 50a and 50b, supplement each other in pairs, when the sample book is closed, so as to form corresponding hollow spaces in the thickness of the interval between the sample cards.

Here, frames 50a and 50b can have the same height, as in the case of the holding units 12a and 12b. But is is also possible to provide differing frame heights, such as, for example, in the case of holding units 12c and 12d.

Three-dimensional samples 52 can be placed on the lower sample card 10b which is associated with holding unit 12b, while sample card 10a which cooperates with sample card 10b of holding unit 12a is provided with a cushion layer 51, for example, made of synthetic foam material.

The depressions in sample cards 10a, 10b, etc., can also be formed by synthetic foil which is molded into the depressions by deep-drawing.

What is claimed is:

1. A display book adapted to hold a plurality of page members and to be opened in the same way as a normal book having a spine and covers, said display book comprising:

1. a plurality of holding units generally in the shape of elongated rectangular parallelepipeds, each of which holding units
 - a. has a first face adapted to form the spine of said display book in a manner to be recited,
 - b. has a second face located opposite to said first face and adapted to hold at least one page member in a position extending therefrom,
 - c. has two oppositely located lateral faces connecting said first and second faces, and
 - d. has two longitudinal grooves therein, each of which is located at or near the interface of said first face with each of said opposed lateral faces, respectively, and each of which longitudinal grooves is broader internally of said holding unit than it is at the surface thereof; and
2. a plurality of elastically deformable joint strips each of which comprises an intermediate bar-like central portion and opposed head portions which are broader than the intermediate bar-like central portion, and each of which joint strips interconnects two adjacent holding units by having the opposed head portions thereof matingly engaged in the broader internal portions of the adjacent grooves on said adjacent holding units, each of said holding units being engaged by at least two of said joint strips, one in either groove thereof, in the above-recited manner,

whereby said holding units may be held together with their lateral faces abutting and their first faces forming a spine or may be pivoted so that the first face of at least one of said holding units abuts against the first face of at least one other of said holding units, allowing a plurality of the adjoining pages held by said holding units to be successively swung in the same direction about 180° with respect to each other in the manner of a normal book.

2. A display book as in claim 1 wherein said elastically deformable joint strips are releasably mounted on said holding units, whereby the number of holding units in said display book can be easily varied.

3. A display book as in claim 1 wherein page members may be positioned within said holding units and bent greater than 90° to lock said page members in place.

4. A display book as in claim 3 where the holding units have protruding studs for seating the bent portion of the page member.

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5. A display book as in claim 1 wherein each of said holding units comprises a base portion and a pair of flexible legs, one of said legs having a cross-sectional L shape.

6. A display book as in claim 5 wherein said flexible L leg has a protruding stud portion on the base of the L and said page members are positioned within said holding units and are bent greater than 90° to lock the page member in place by engaging the end of the page member with said stud portion.

7. A display book as in claim 5 wherein the one of said pair of flexible legs which does not have a cross sectional L shape is straight and said straight leg has a locking stud thereon adapted to engage a hole in one of said page members.

8. A display book as in claim 5 wherein at least one of said holding units further includes a pair of lip members for engaging one of said page members.

9. A display book as in claim 5 wherein said holding

units are arranged so that said L shaped legs are staggered with respect to each other.

10. A display book as in claim 5 wherein said holding units are positioned so that the L shaped legs of each holding unit are facing another L shaped leg of another holding unit.

11. A display book as in claim 1 further including a pair of cover members respectively fastened to each end of a plurality of holding units and a latch member capable of interconnecting the cover members at the free end of the page members.

12. A display book as in claim 11 wherein said latch member includes a pair of lid members pivotally fastened respectively to each cover member.

13. A display book as in claim 12 wherein one lid member is releasably fastened to the other lid member.

14. A display book as in claim 12 wherein one lid member has a handle portion.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,793,758 Dated February 28, 1974

Inventor(s) Johann FELDHUSEN et al

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Please add the attached Figure 11 of the drawings to the patent.

This was erroneously omitted during printing, as noted by the attached Letter from the Office of Publications.

Signed and sealed this 3rd day of December 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents